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BostonGene and Kyoto University accelerate precision drug development

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AI-powered multiomics platform to drive predictive biomarker identification and personalised therapies



US-based BostonGene, developer of the leading AI foundation model for cancer and the immune system, and Kyoto University, a Japanese research institution known for its groundbreaking advancements in medicine and science, have announced a research collaboration to develop advanced biological signatures to enhance targeted treatment strategies for patients with esophageal squamous cell carcinoma (ESCC).

This research will leverage BostonGene's AI-powered, multi-scale, omnimodal platform to analyse tumour molecular profiles and assess their correlation with response to a novel immune checkpoint inhibitor (ICI) and chemoradiotherapy (CRT) combination therapy.

The study builds on the NOBEL trial, an investigator-initiated clinical study led by Dr Manabu Muto of Kyoto University, by integrating genomic and transcriptomic profiling from ESCC patients to identify immune-related biomarkers that drive drug development, optimise clinical trial design and enable more accurate patient stratification. The NOBEL trial is being conducted as an investigator-initiated trial with financial support from Ono Pharmaceutical.

As part of the collaboration, Kyoto University will provide clinical samples and patient data and BostonGene will apply its AI-powered molecular analytics to uncover key biological pathways and associated biomarkers influencing treatment response.